

Reading the Earth as Palimpsest

This planet is green and luscious; it is an oasis in the solar wasteland. The burgeoning earth reveals itself to us daily. The glimmer of water, the ice caps at the poles, glittering in the sunlight. The green masses of the continents, the blue of the seas, all of it coming and going in endlessly shifting patterns behind drifting white clouds. Indeed, this is a garden in the solar desert. Particularly evocative is the imagery of the continents, floating and jostled into each other like froth on the churning oceanic plates of the Earth, teeming with a surprisingly robust and assertive biological component, laughing yet seesawing through disasters, extinctions, and self-induced crises of a scale that reduces the palimpsest of human intervention to ripples from a plunked stone. The history of life and the earth's surface reveals to us the origins of diversity that have created what we see before us today, the dynamic modern world.

The dynamic living sphere of planet Earth is the most remarkable and unique characteristic of our world. Its evolution beginning as far back as 4.2 billion years but by 2.7 billion years ago life had started to have a significant effect on the atmosphere, oceans, and lithosphere, and continuing to impact our lived environments today with multiple factors that control the processes of life.

The environmental palimpsest of the world truly reflects its history. Landscape as palimpsest gives an empirical and objective approach utilising the world we are surrounded by today and identify the shaping, practises and events of the past that have created it. Palimpsest comes from the Latin *Palimpsestos* meaning scraped again. A palimpsest is an ancient Egyptian papyrus document which is constantly reused. Existing writing when erased leaves a faint trace, with successive reuse, successive faint 'layers' of barely traceable writing are left as 'echoes' on the page.

The Earth's landscape contains a physical record of successive impacts on the planet by the earth's environment, geological, hydrological, atmospheric and humanitarian elements and controls. Landscape and planet earth are a composite record of the past human cultures and environmental activity: A global palimpsest.

Today we are left with a complex composite outcome of the different ways in which each successive generation in the past has lived in, cared for, and exploited its resources. The composite outcome results also from the dynamic processes of the biosphere and the often dramatic environmental changes that have punctuated life's history; for example deforestation, urbanisation and climate change.

Activities or 'writing' on the earths landscape will re-use and modify the settlement patterns, geology, natural phenomenon, ecosystems, hydrology and other 'landscape inscriptions' created by previous generations of inhabitants. 'Writings' that remain are left as 'fossil' features in the landscape. The concept of palimpsest relies on the present landscape being the key to the past and in turn helping us determine future practises that will sustain our ever fragile and exploited earth.

Palimpsest ideology ensures that the earth is viewed in a context were the past is reflected in the many layers of the landscape and the remnants that each event leaves: climate change, mismanagement, unsustainability and modern influences are all evident in the surrounding world. It is often said that the further you look back the

more you can see into the future, research into the formation of the Earth, it's palimpsest and affecting factors may be key in ensuring that future evolution ensures sustainable health of the planet's life support systems which is absolutely essential if human societies are to survive.

Landscape can be read as a palimpsest as the processes and formations that have occurred on the land leave evidence and reminders today that can be interpreted to form a complete picture of the past. What has occurred in the past is crucial in understanding how human activities can interact with those of the environment. In turn this can identify the effects that arise from natural long-term variations and those that occur as a result of short-term human activities, enabling us to begin to understand the dynamic interaction of the processes of the modern world. This results in action to maintain the health of the planet's diversity and vitality in the future.

The essentialist term of palimpsest is characterised by the assumption that there is a singular, 'authentic' meanings to each class of landscape evidence that exists today of the past. It gives emphasis on material sites and landscapes that are still in existence today which is associated with the vulnerability of data loss. The 'survivability' of data is crucial to understanding the past. This leads to limitations which question Darby when he says that 'the landscape is the fullest and most certain of documents'

Limitations of palimpsest include that a single authentic meaning is denoted to a landscape. Assumptions of the same interpretative meanings are desired but within science there are often conflicting opinions regarding the origins of the earth, timescales and processes. The world is often assumed to be ambiguous and changing and the history of the earth was determined by certain characteristics within boundaries. Palimpsest ideology is limited by the planet being perceived singularly and being dateable dependant, with resulting difficulties of the further back you go the less evidence remains.

Landscapes as 'artefacts' embody meaning that are revealed in the past through communities and individuals. In our thinking it is important to consider our positionality within these dynamic earthscapes. There is never one authentic 'correct' way of interpreting landscape or one 'authentic' meaning in subjective and conflicting studies. Landscape will carry different meanings for the different groups and individuals depending on their life experience and sense of identity, their position within that society and their relationship with the land and dynamism. Positionality may change over time due to wealth, politics, environmental or ecological changes, war, revolution, drought, and famine this effects society in unforeseen and differentiating ways. These multiple and changing positions lead to multiple readings which can lead to conflicting interpretations of palimpsest often forming the catalyst for future change and sustainability.

Transformations of the modern earth include the huge growth of greenhouses in southern Spain; the rapid rise of shrimp farming in Asia and Latin America; and the emergence of a giant, puppet-shaped peninsula at the mouth of the Yellow River that has built up through transportation of sediment in the waters. There are imminent consequences and effects looming from retreating glaciers on mountains and in Polar Regions, deforestation in South America and forest fires across sub-Saharan Africa. Life's history has been punctuated by events on many scales leading to dramatic

environmental changes: from delicate interactions of climate change, to plate tectonics, global levels of volcanism, sea-level rise and fall, changing biogeochemical cycles and periodic cataclysmic events. These events; past, present and proceeding, must be considered as creating the palimpsest of earth and planning for a prosperous future.

The battle for sustainable development, for delivering a more environmentally stable, just and healthier world should focus on interpreting the origins of diversity and past global events, incorporating them with current world trends in order to form a dynamic construct of earth and life. In understanding these dynamic interactions and processes that have created the modern world programmes of change can be implemented successfully. This will ensure that the impacts of negative global processes will not stretch beyond their physical borders affecting countries, regions and the planet as a whole. The planets life support system will be maintained by understanding the past and creating applications for the future; it is clear that an objective understanding of the past helps to release us into the future.

The Earth's ecosystem and environment has developed and changed over time, over the last 4.2 billion years. By being so tangible, natural and familiar, the landscape is unquestioned. What it shows is concrete evidence of how society and the environment is organised, and this can very easily be seen as evidence of how it should or must be organised. Events in the past can help us deal with present and future changes by planning for sustainability and maintaining life. An objective and focused understanding of the past helps to release us into a dynamic and better future.

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